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Effect of Nasal Obstructive Disorders on Sinonasal Symptoms in Children with Different Levels of Bronchial Asthma Control

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Abstract

© 2018 T. I. Eliseeva et al. Allergic rhinitis (AR) and allergic rhinosinusitis (ARS) are typical upper airway pathologies (UAP) in children with bronchial asthma (BA) frequently accompanied with nasal obstructive diseases (NOD). In order to establish the effect of NOD on correlations between nasal and synonasal symptoms with clinical assessments of asthma control, 82 children, 9.8 [8.9; 10.7] years old, with atopic BA were assessed using ACQ-5 for the BA control level, TNSS for nasal symptoms, and SNOT-20 for synonasal quality of life in combination with rhinovideoendoscopy for NOD. All patients had AR/ARS; in 76.3% (63/82) of children, UAP had a multimorbid character with the presence of NOD. Significant correlations were found between ACQ-5 and TNSS ($R=0.40$, $p<0.0001$) and ACQ-5 and SNOT-20 ($R=0.42$, $p<0.0001$). Correlations between TNSS/ACQ-5 and SNOT-20/ACQ-5 were higher in patients who do not have a combination of AR/ARS with NOD ($R=0.67$, $p=0.0012$; $R=0.50$, $p=0.022$, resp.) than in patients who have AR/ARS combined with NOD ($R=0.30$, $p=0.015$; $R=0.26$, $p=0.04$, resp.). Thus, the association of BA control level with the expression of nasal and synonasal symptoms is higher in children who do not have multimorbid UAP.

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